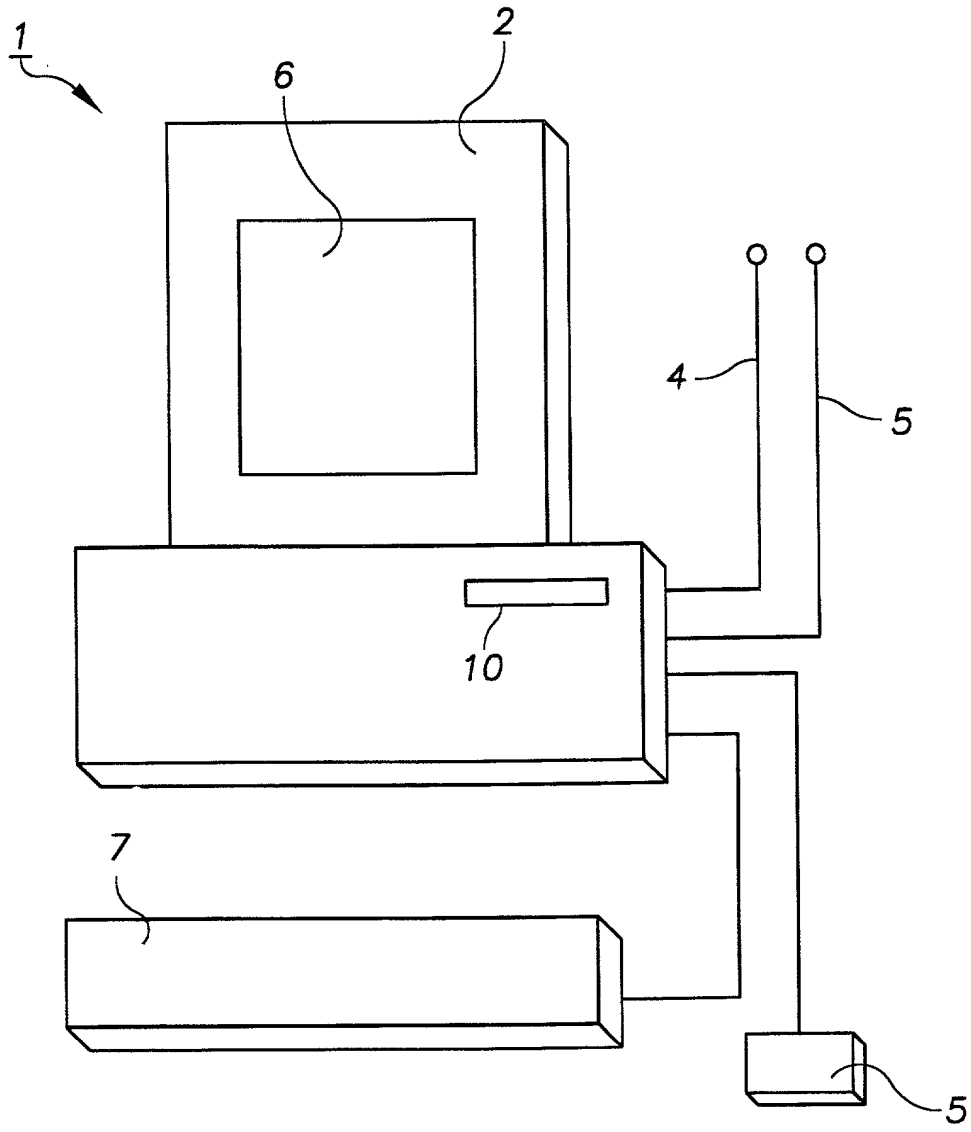
FIG. 1



T08030 S2662260

FIG.2

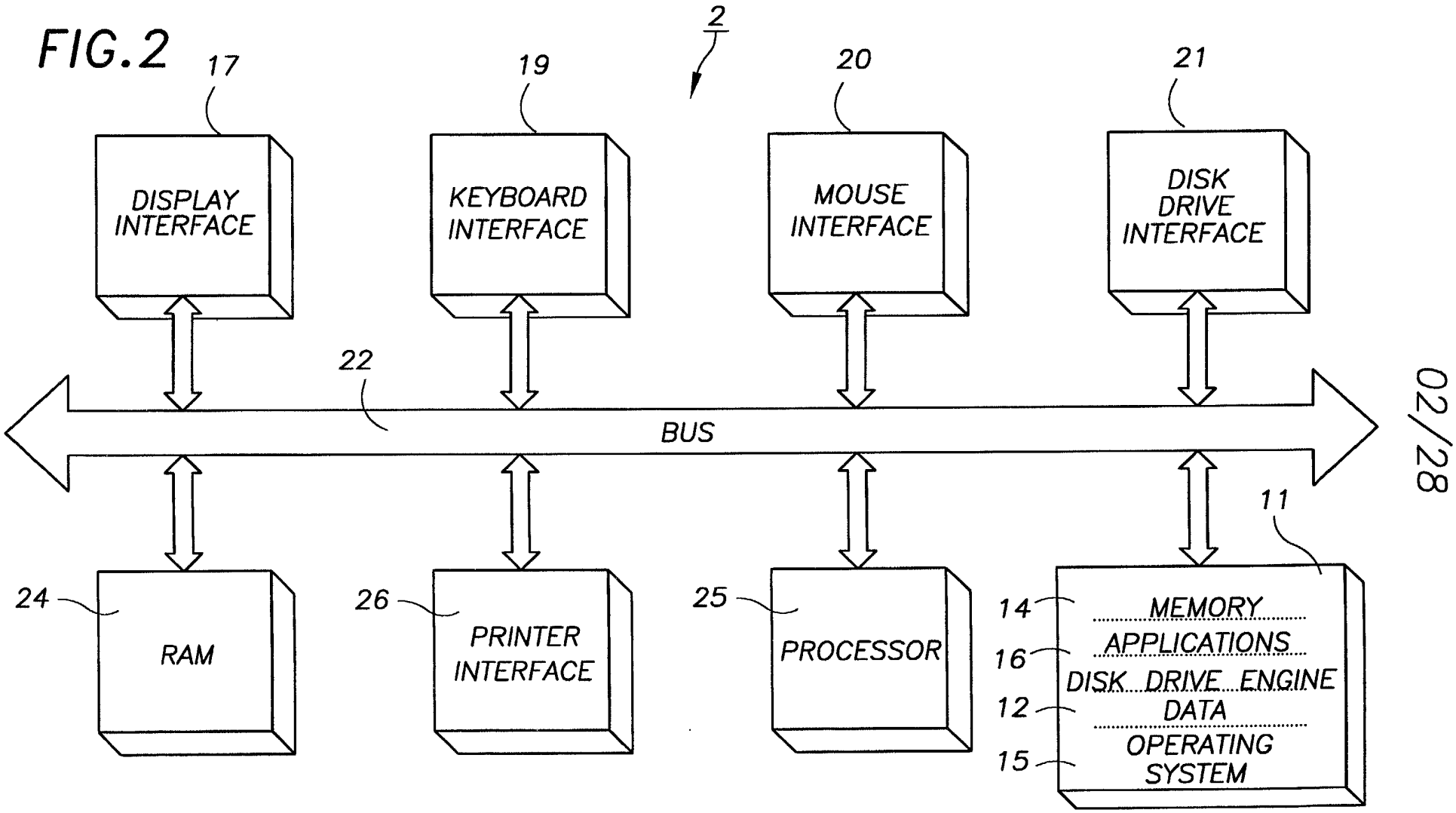
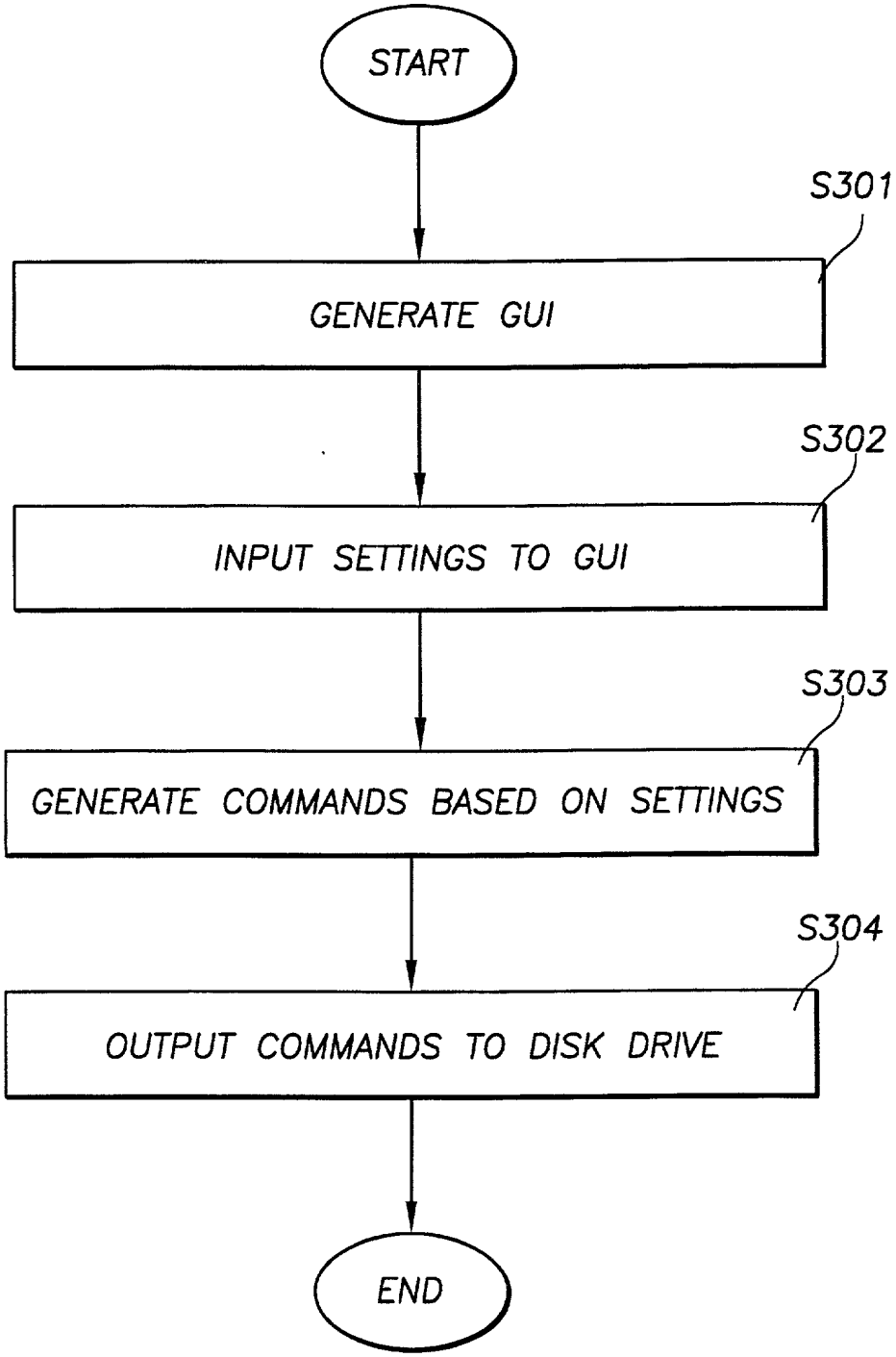


FIG.3


START
S301
GENERATE GUI
S302
INPUT SETTINGS TO GUI
S303
GENERATE COMMANDS BASED ON SETTINGS
S304
OUTPUT COMMANDS TO DISK DRIVE
END

EP 0 859 313 A2

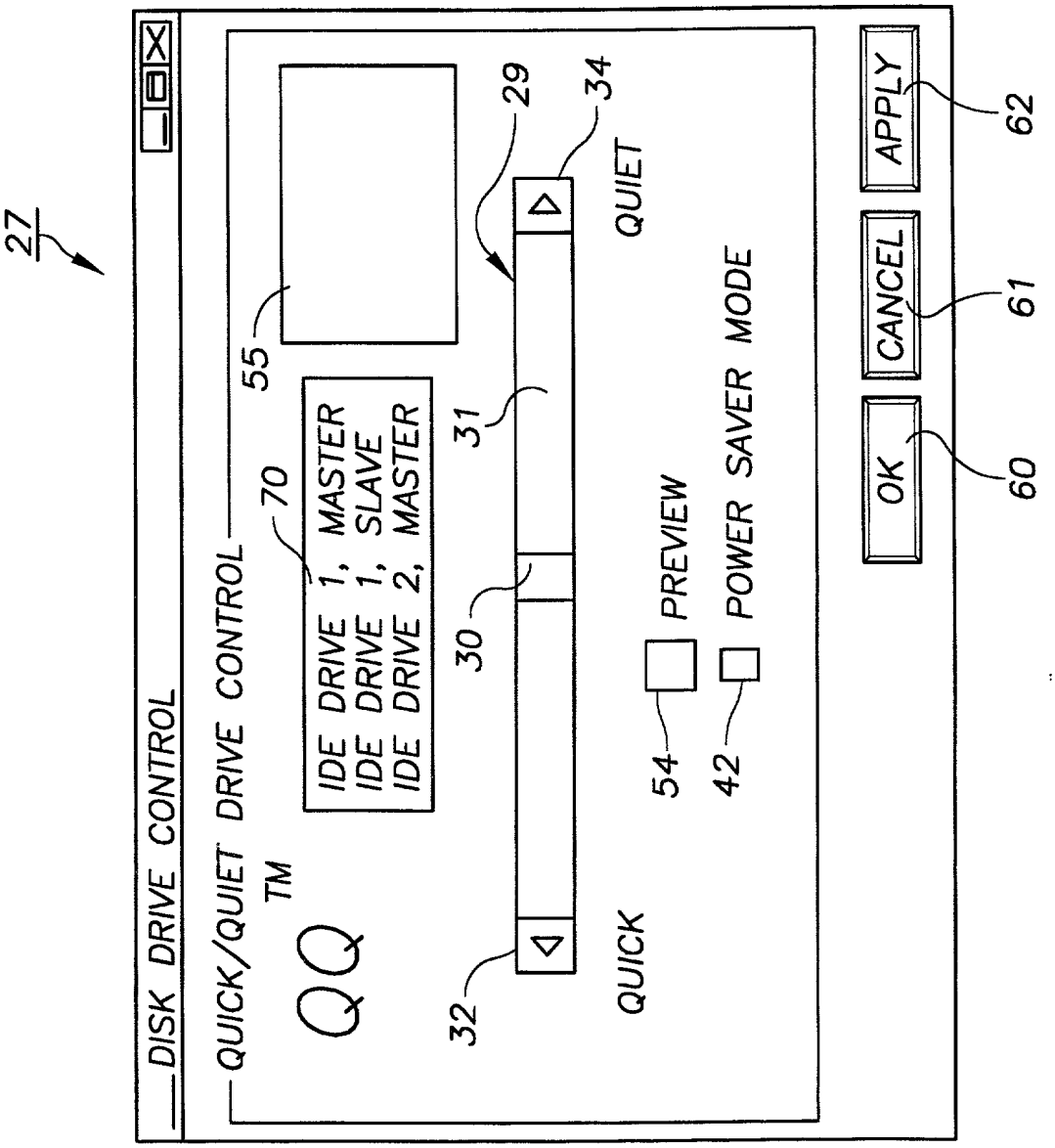


FIG. 4

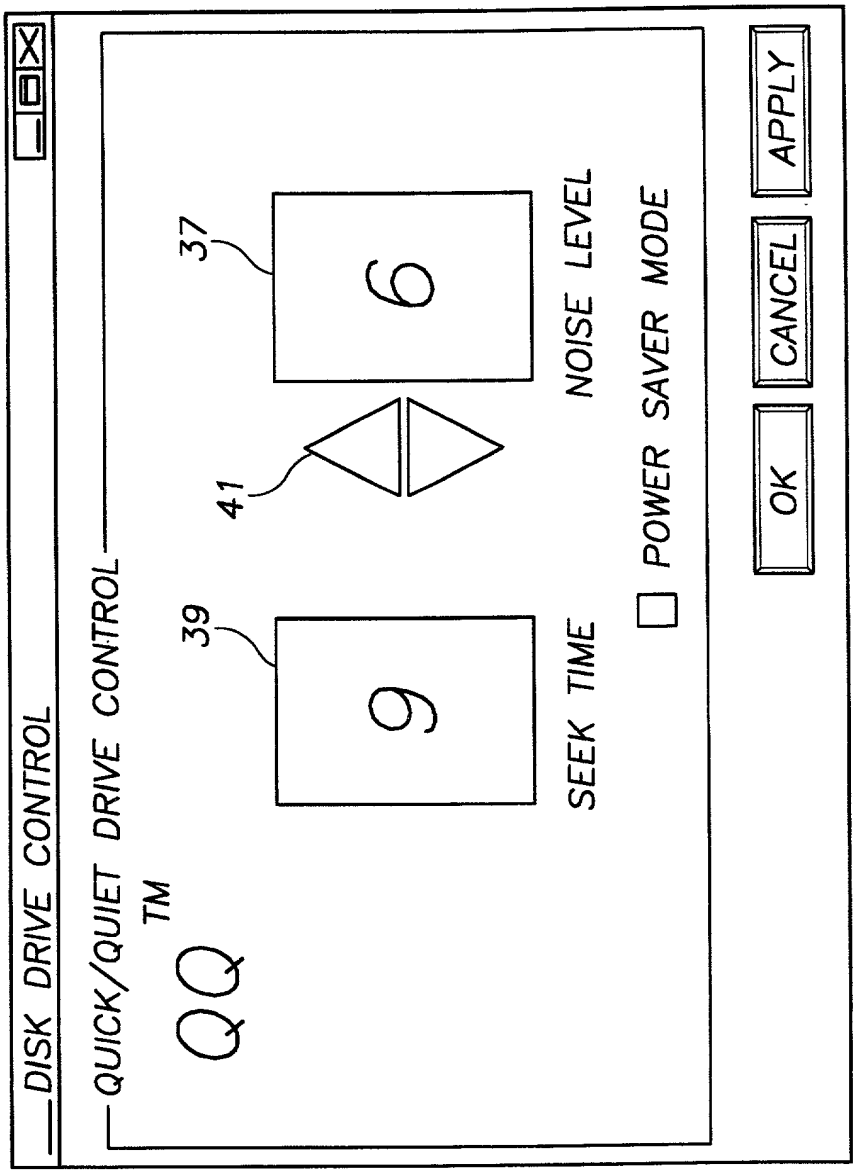
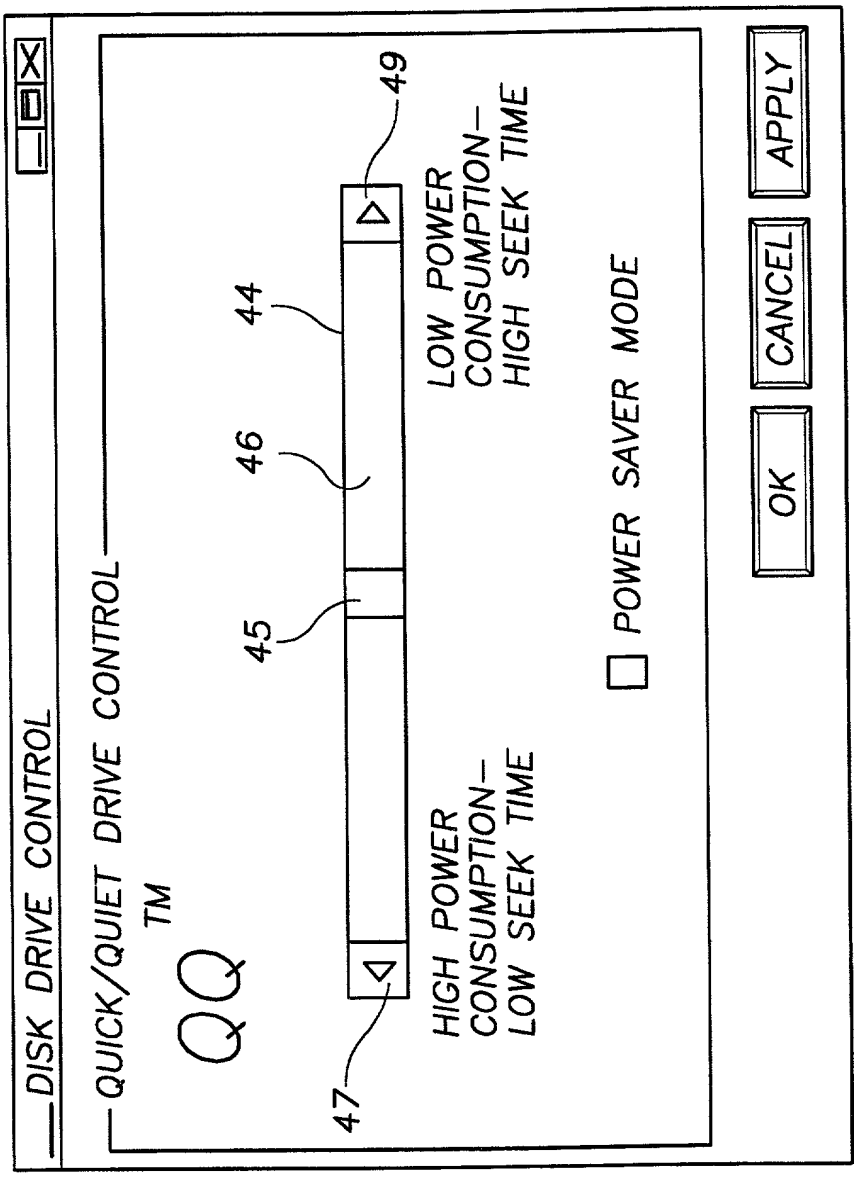

DISK DRIVE CONTROL
QUICK/QUIET DRIVE CONTROL
QQ
TM
39
9
SEEK TIME
41
37
6
NOISE LEVEL
POWER SAVER MODE
OK
CANCEL
APPLY

FIG.5

WO 98/35345 PCT/US98/02458

FIG.6



WO 00/36509 PCT/US99/29769

FIG. 7

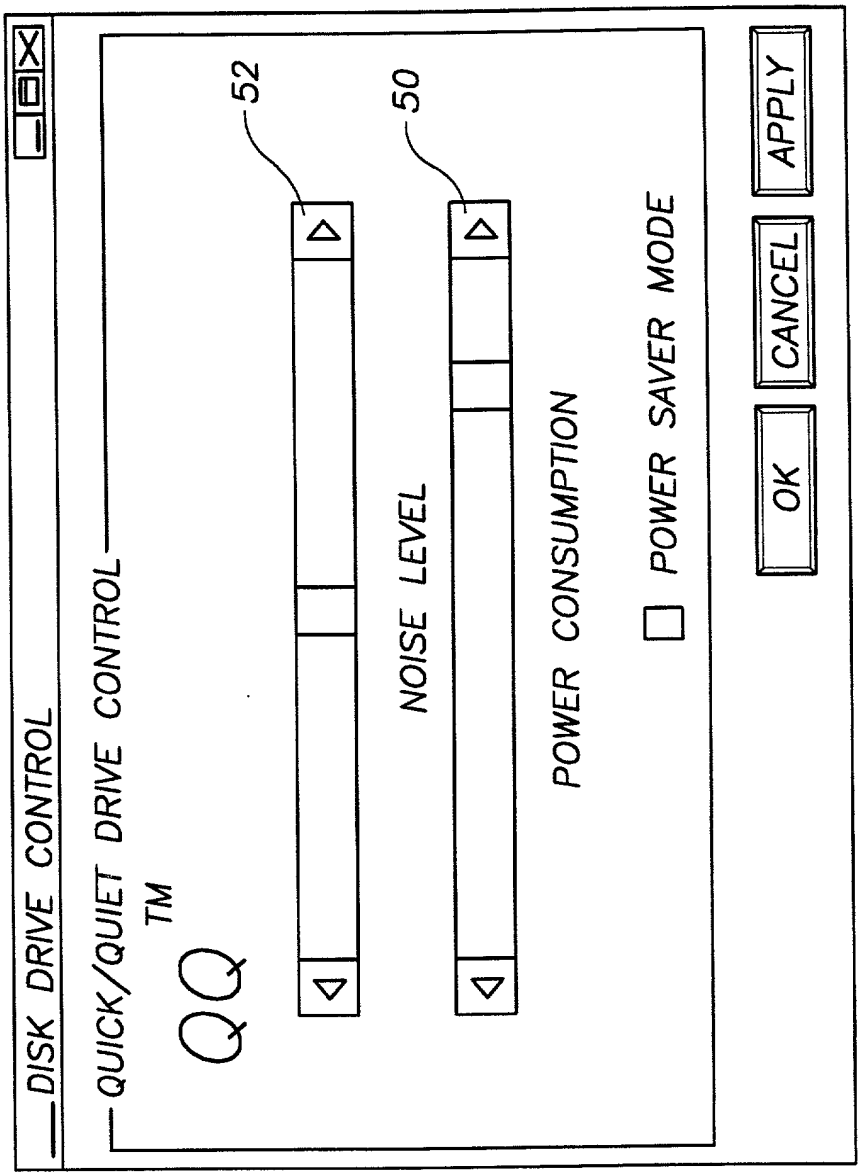


FIG.8

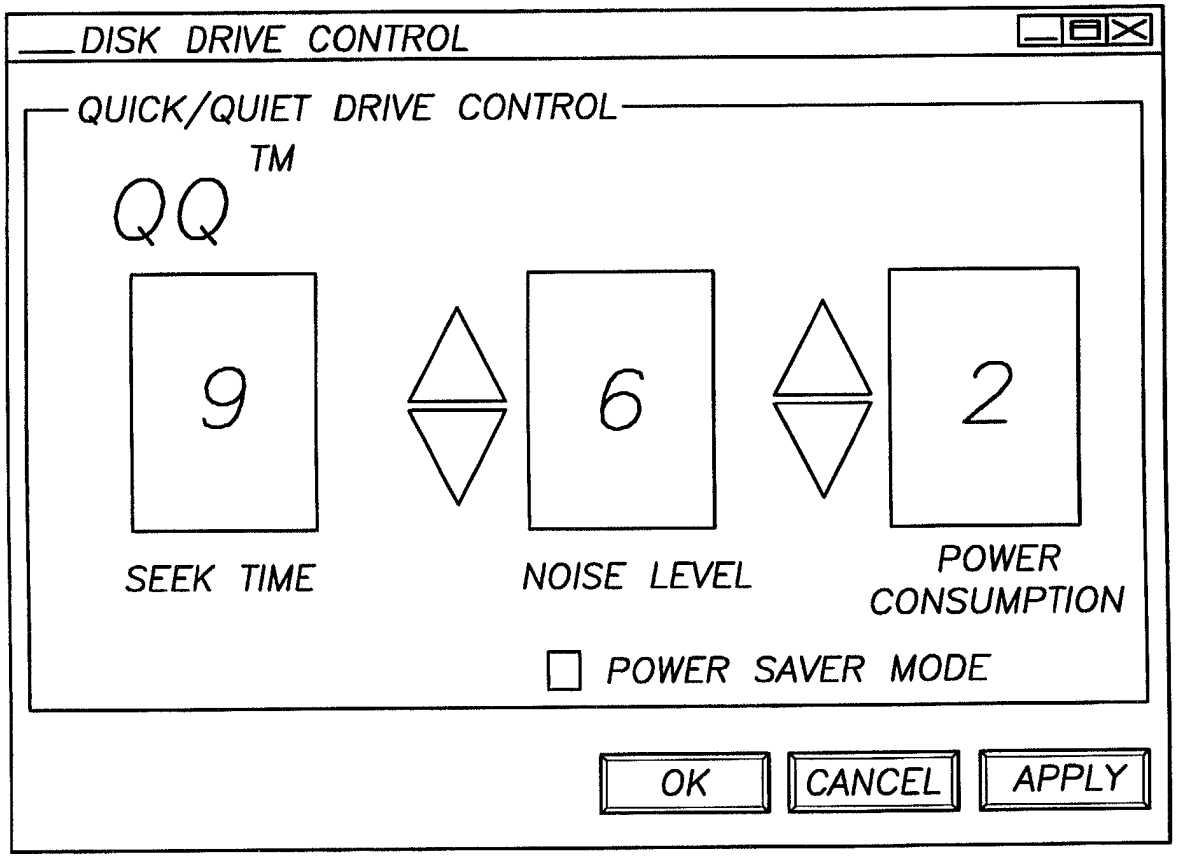
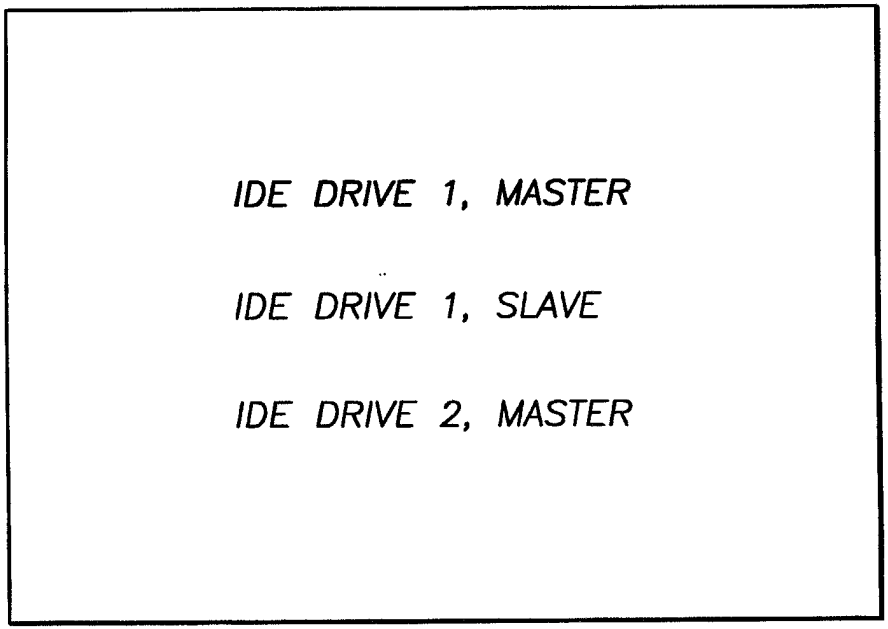

DISK DRIVE CONTROL
QUICK/QUIET DRIVE CONTROL
QQ TM
9
6
2
SEEK TIME
NOISE LEVEL
POWER CONSUMPTION
POWER SAVER MODE
OK
CANCEL
APPLY

FIG.9



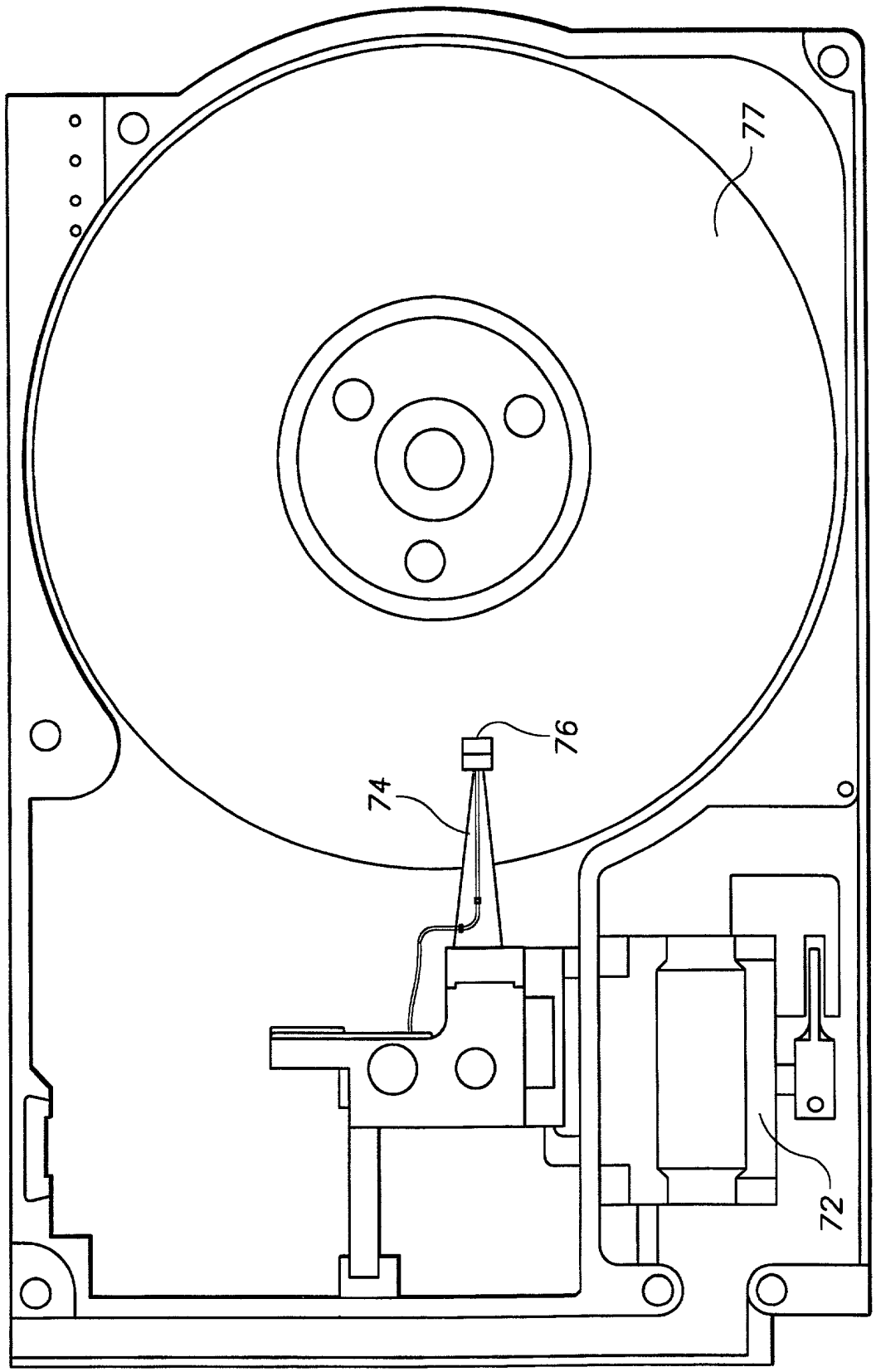


FIG. 10A

FIG. 10B

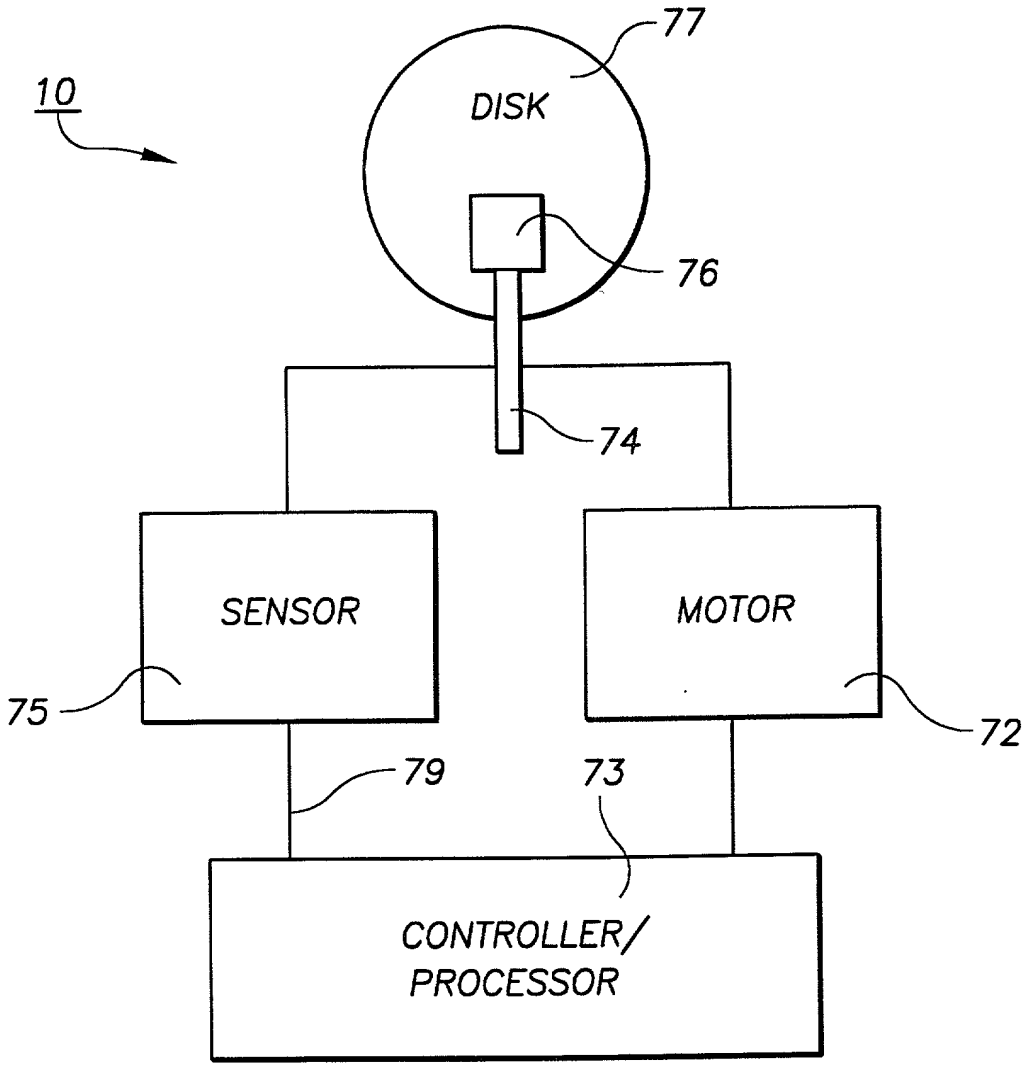
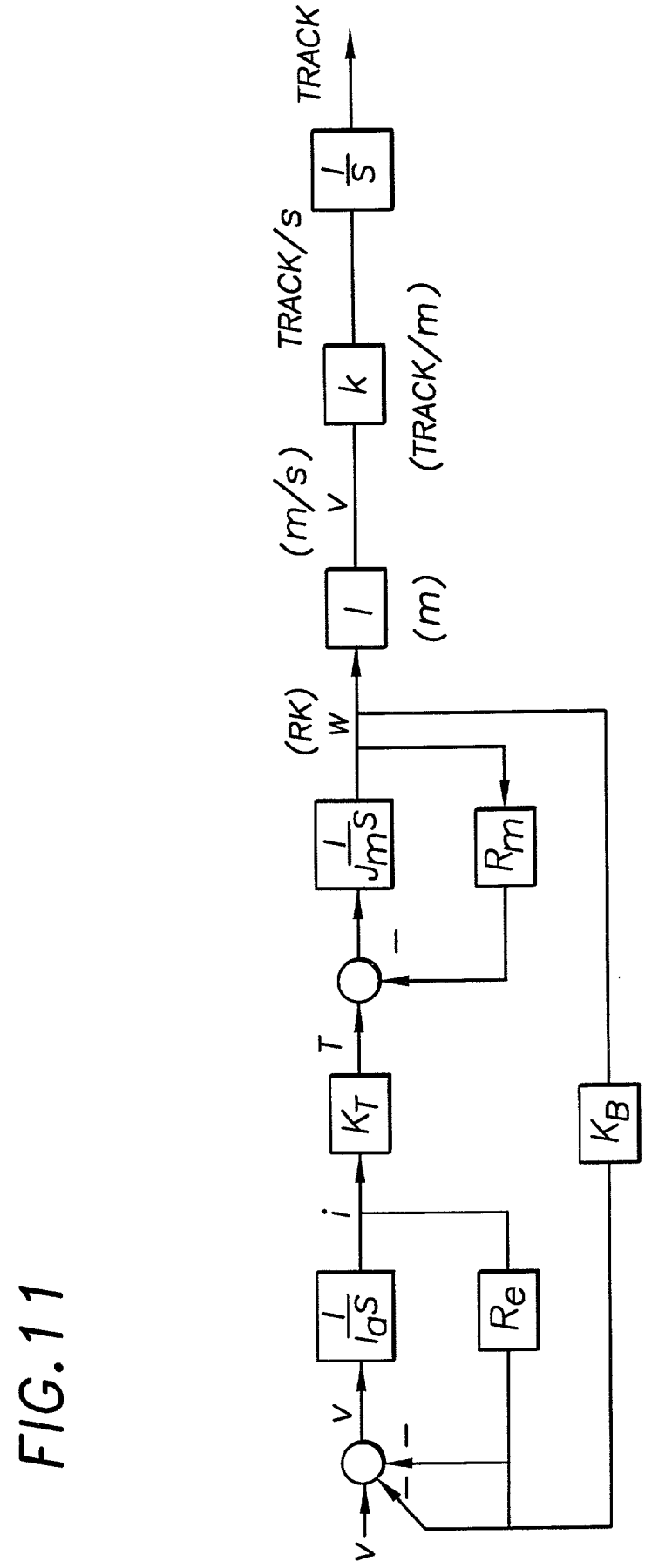

10
77
DISK
76
74
SENSOR
MOTOR
75
72
79
73
CONTROLLER/
PROCESSOR

FIG. 11


v
−
−
v
$\frac{1}{l_a s}$
R_e
i
K_T
T
−
$\frac{1}{J_m s}$
R_m
(RK)
w
l
(m)
(m/s)
v
k
(TRACK/m)
TRACK/s
$\frac{1}{s}$
TRACK
K_B

WO 98/36407 PCT/US98/02789

FIG. 12

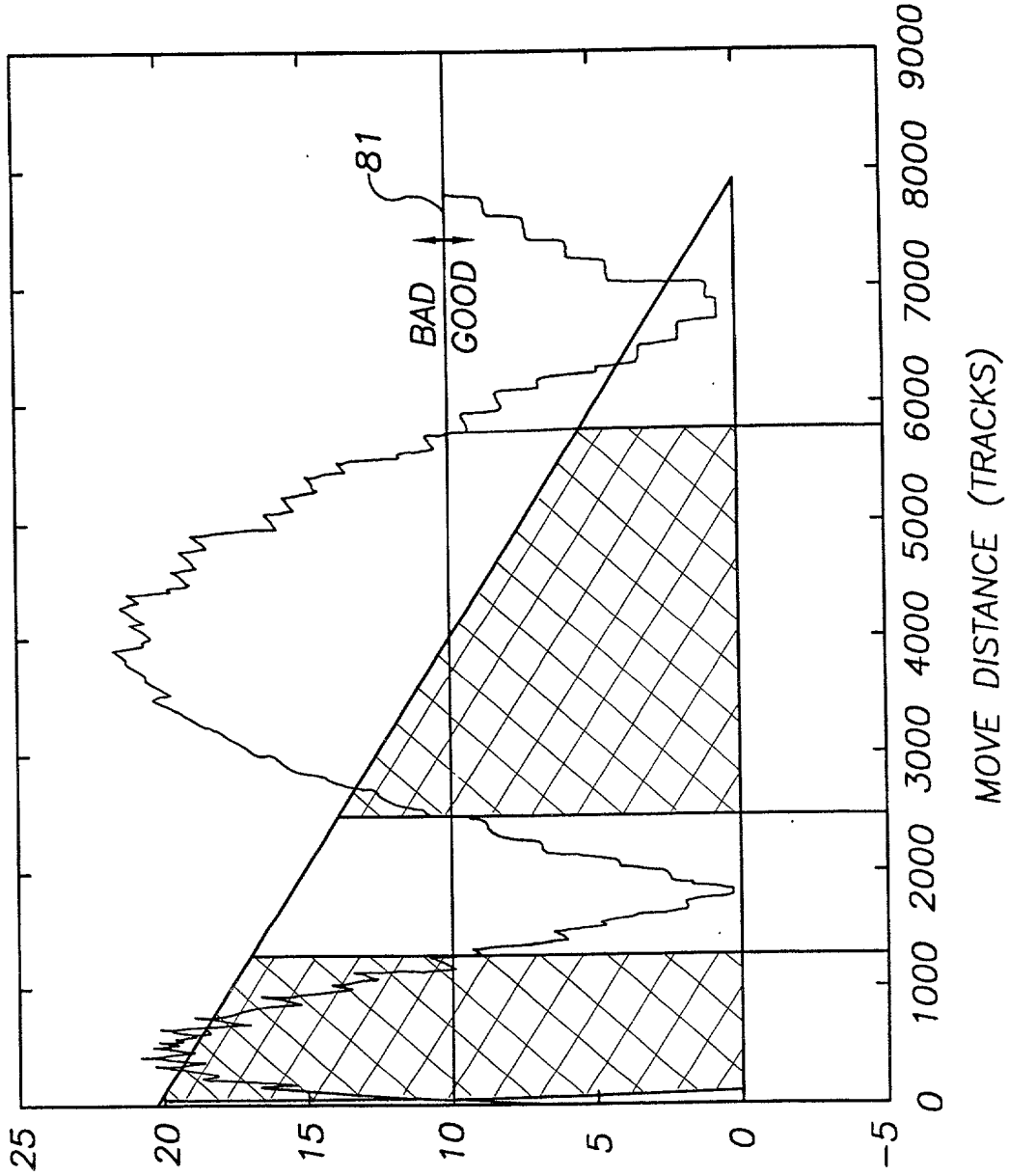


FIG. 13
PRIOR ART

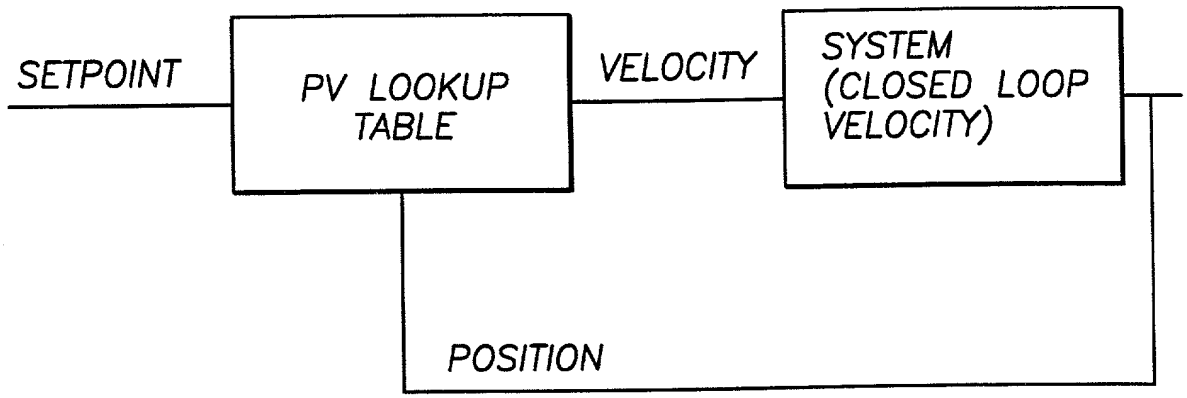


FIG. 14

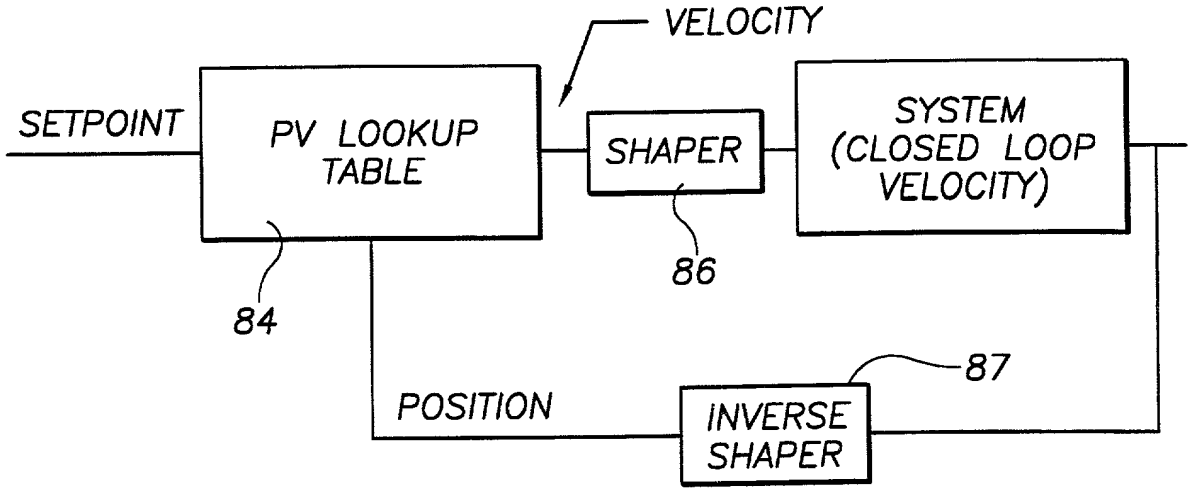


FIG. 15

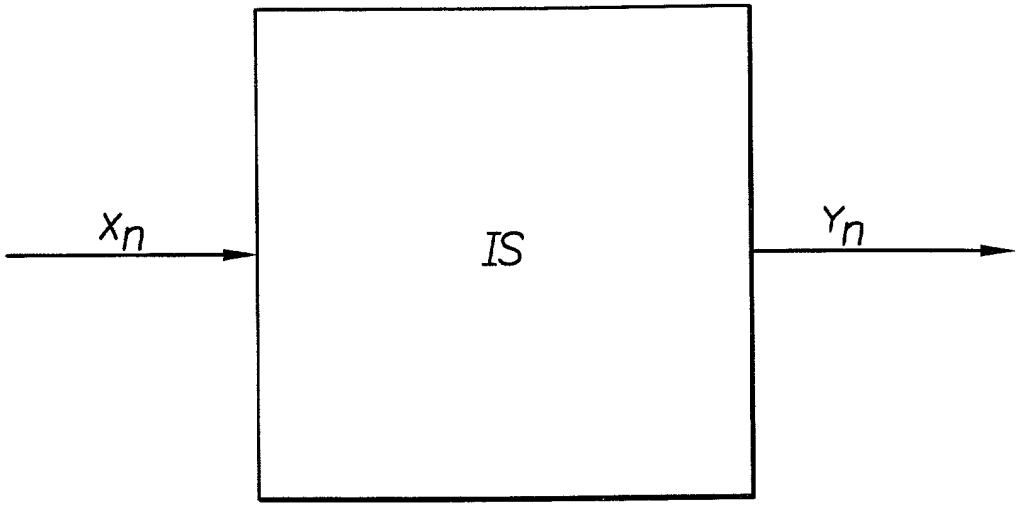


FIG. 16

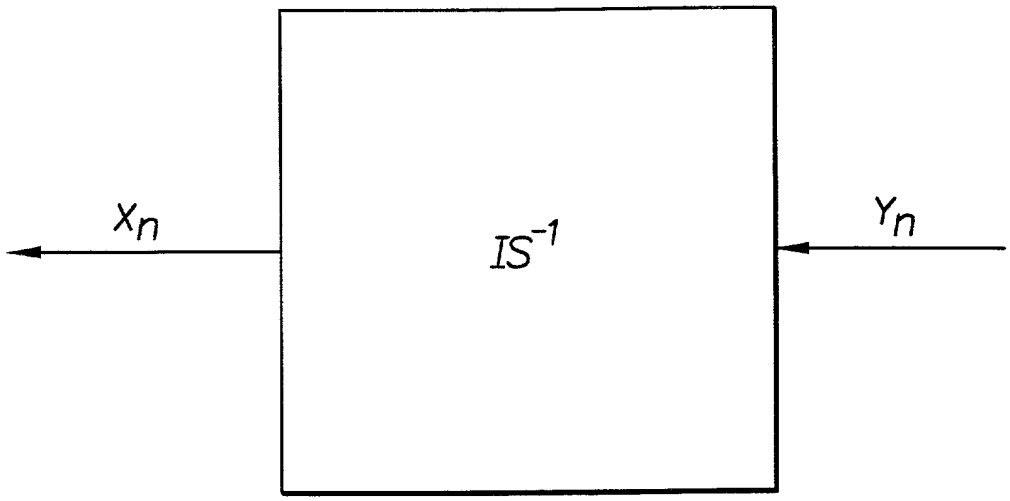


FIG. 17

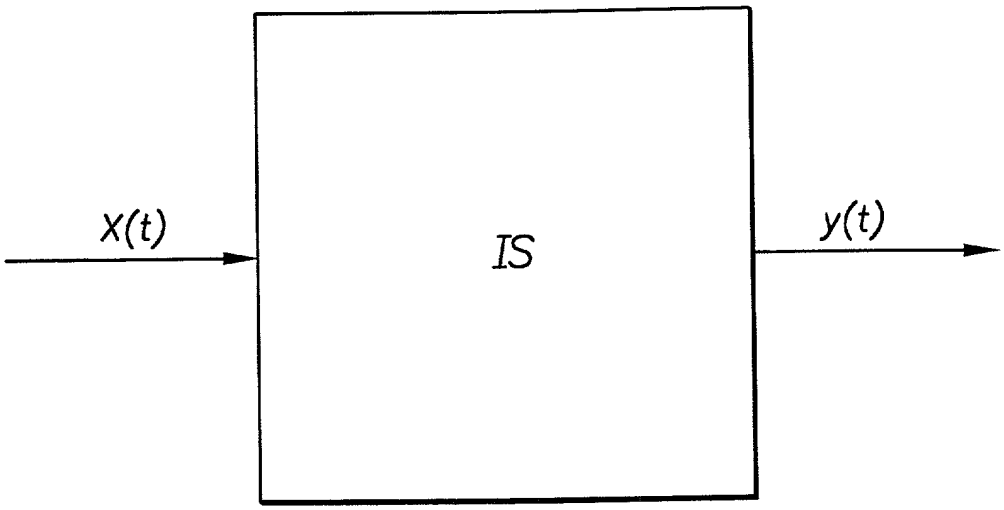


FIG18

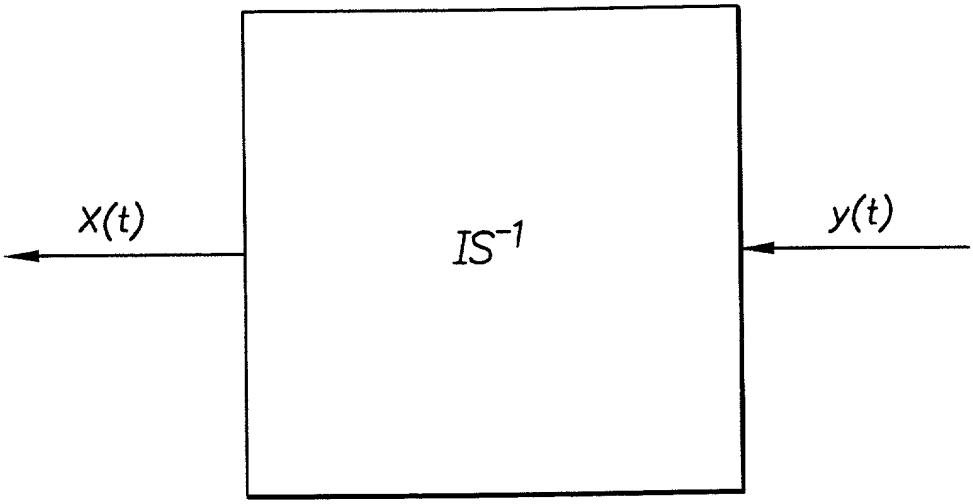


FIG. 19

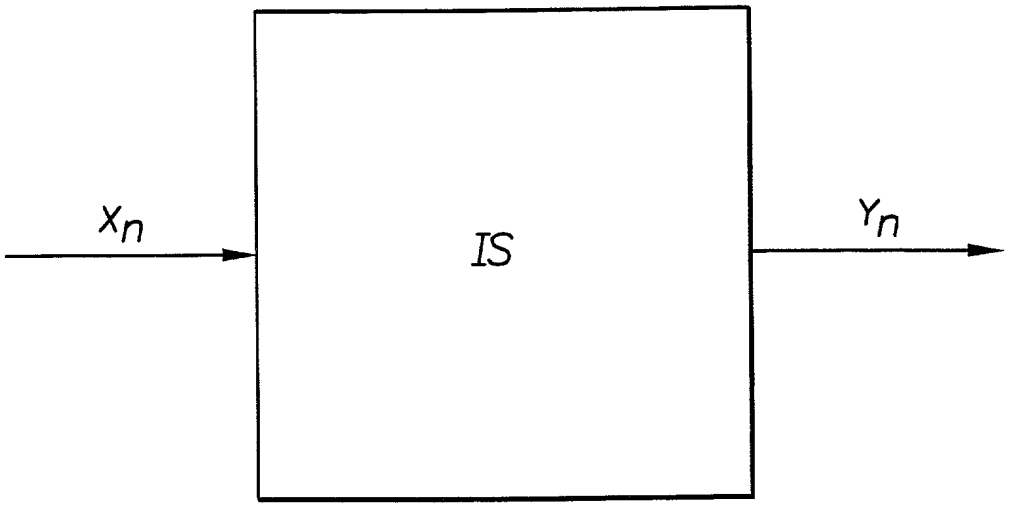


FIG20

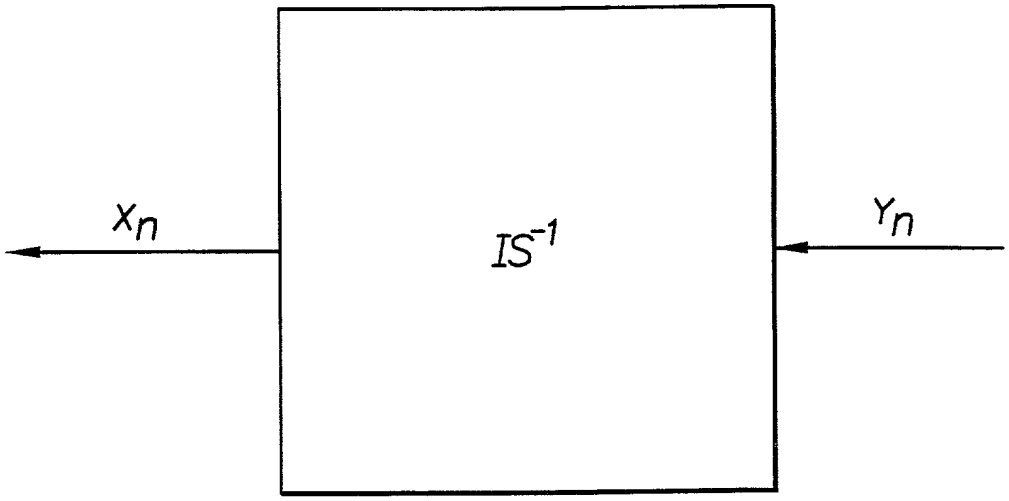


FIG. 21

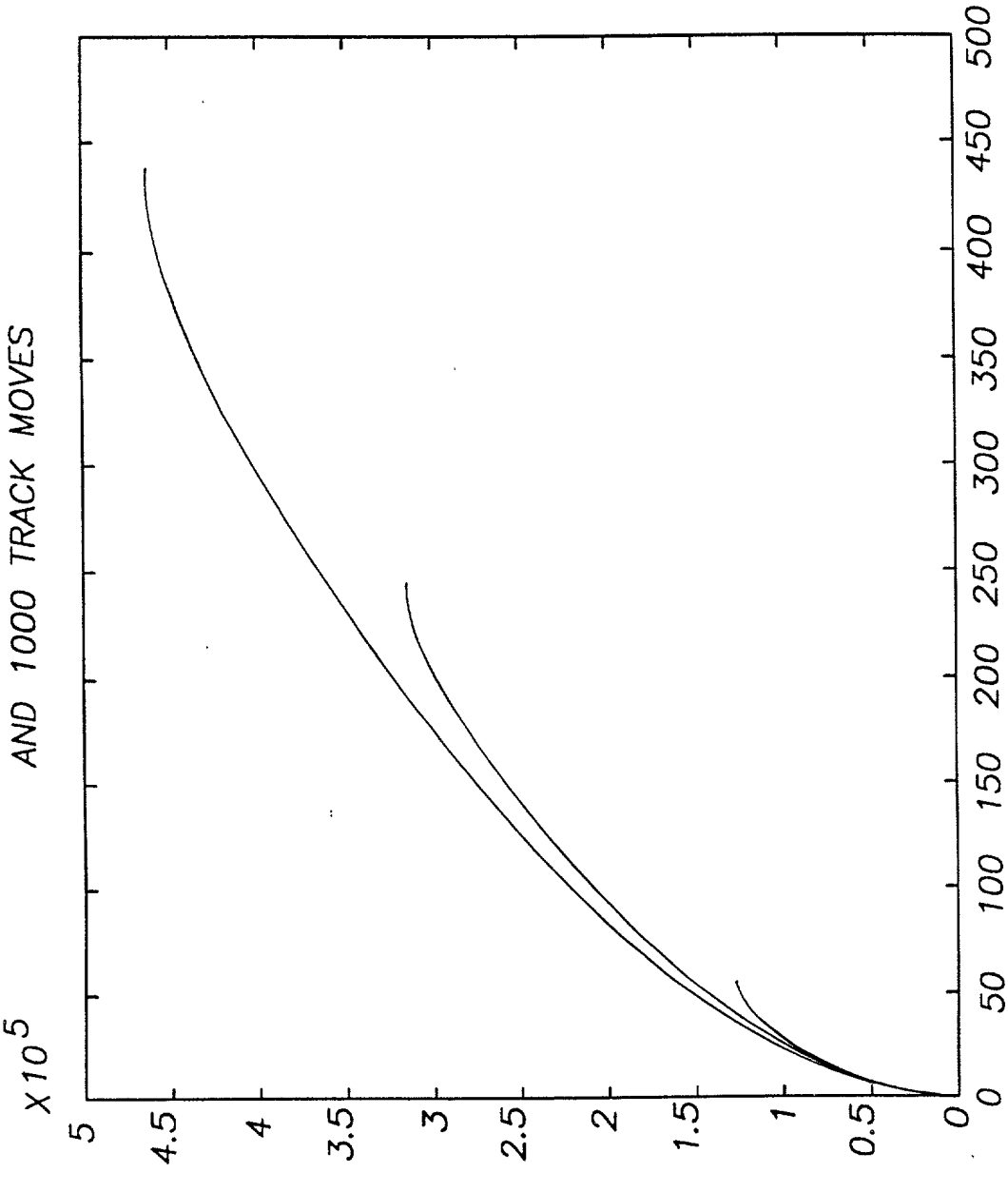
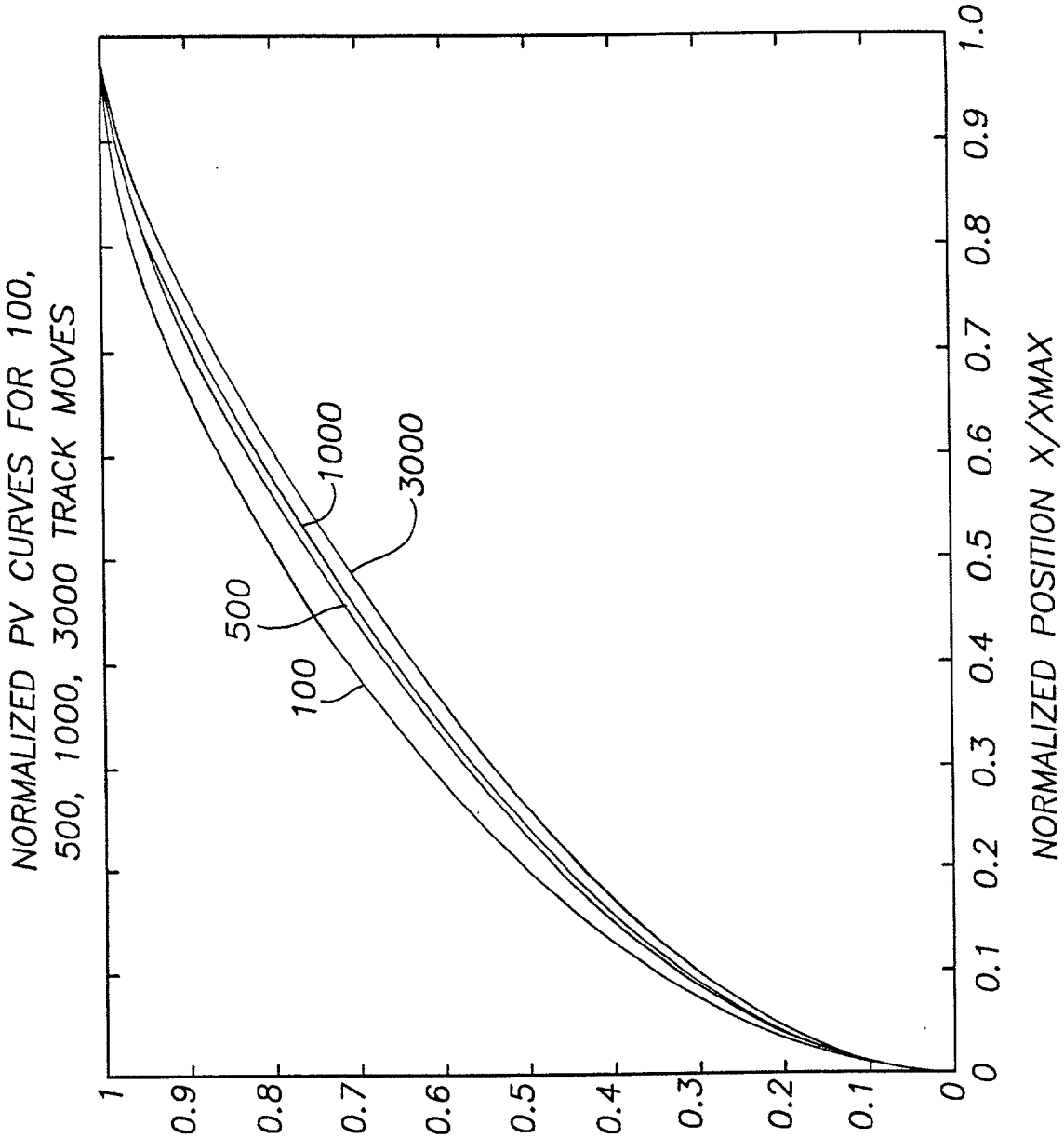

PV CURVES FOR 100, 500,
AND 1000 TRACK MOVES
X 10^5
VELOCITY COMMAND
(TRACKS/SEC)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0
50
100
150
200
250
300
350
400
450
500
TRACKS TO GO

FIG. 22


NORMALIZED PV CURVES FOR 100,
500, 1000, 3000 TRACK MOVES
NORMALIZED VELOCITY
COMMAND VC/VCMAX
NORMALIZED POSITION X/XMAX
100
500
1000
3000
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1

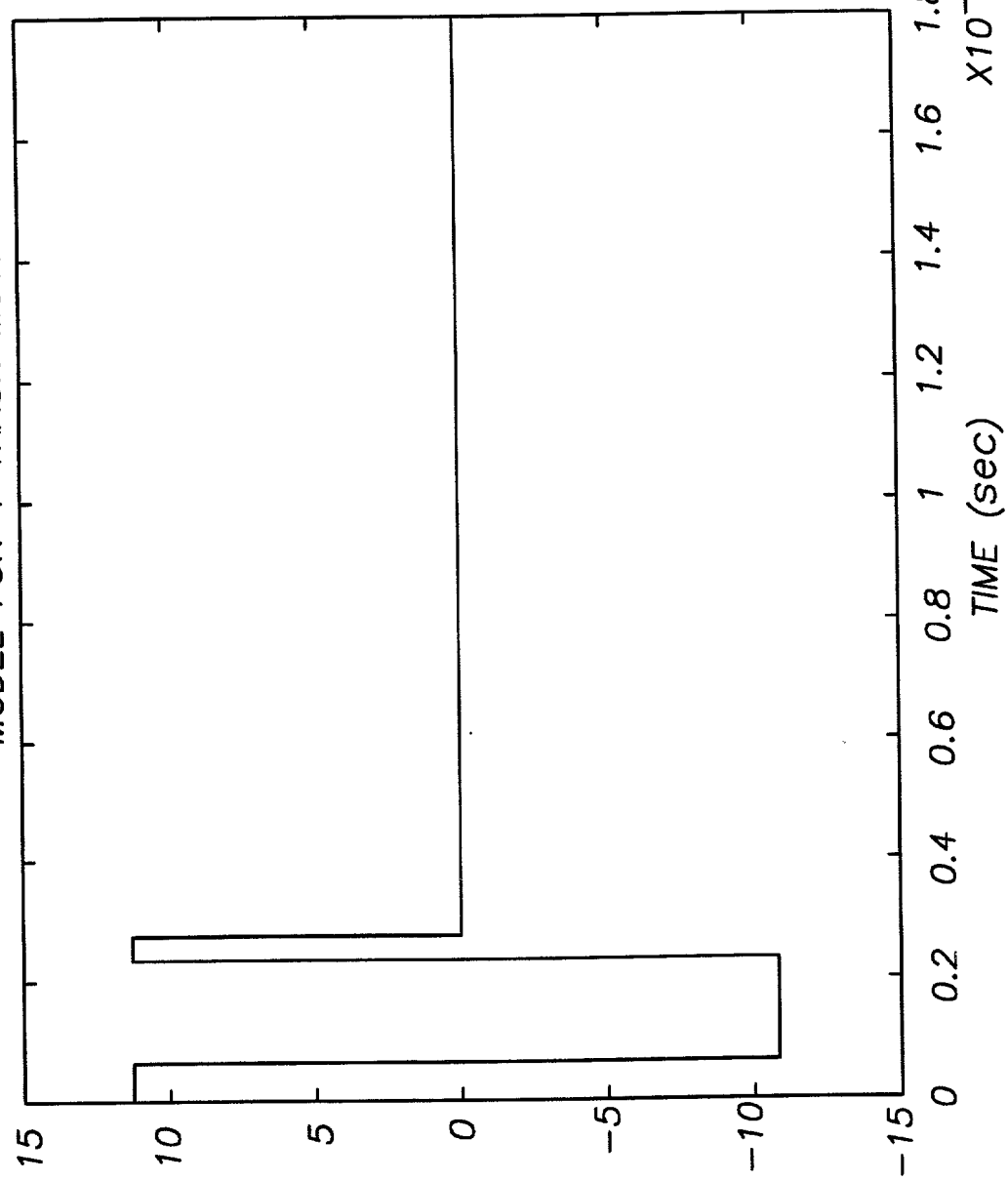

VOLTAGE INPUT TO RIGID BODY
MODEL FOR 1 TRACK MOVE
INPUT VOLTAGE
(VOLTS)
15
10
5
0
−5
−10
−15
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
TIME (sec)
X10−3

FIG.23A

T3S0570 - 5/3/95/250

FIG.23B

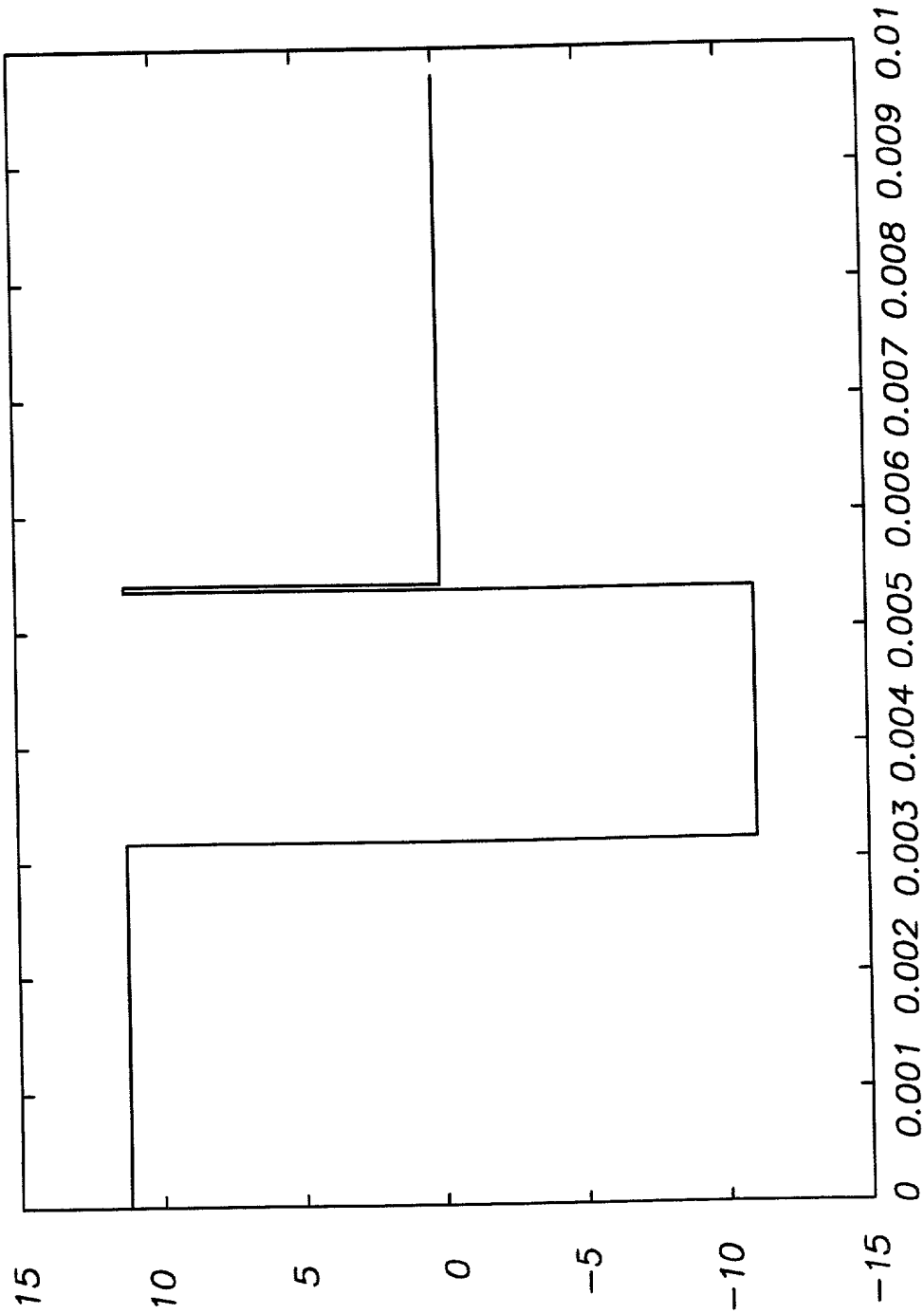


FIG.24

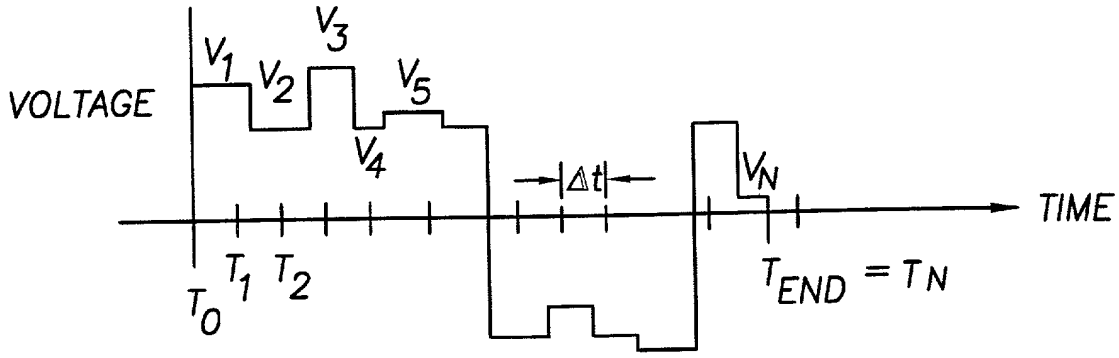


FIG.25

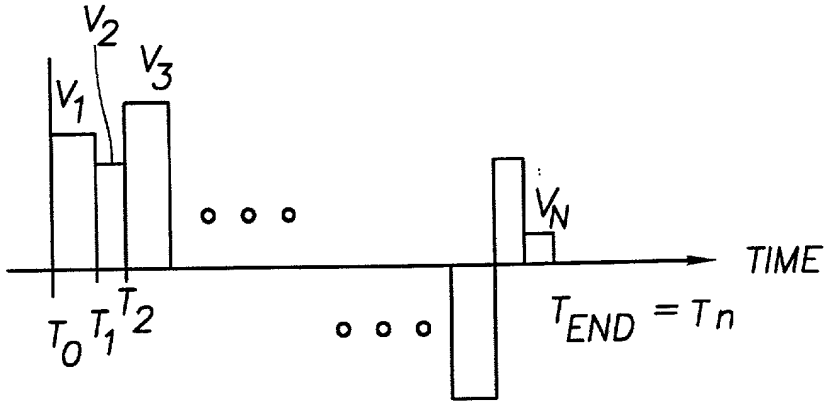


FIG.26

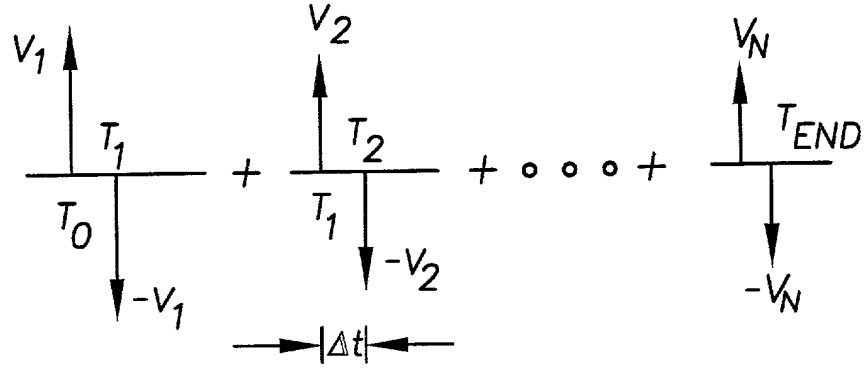


FIG.27

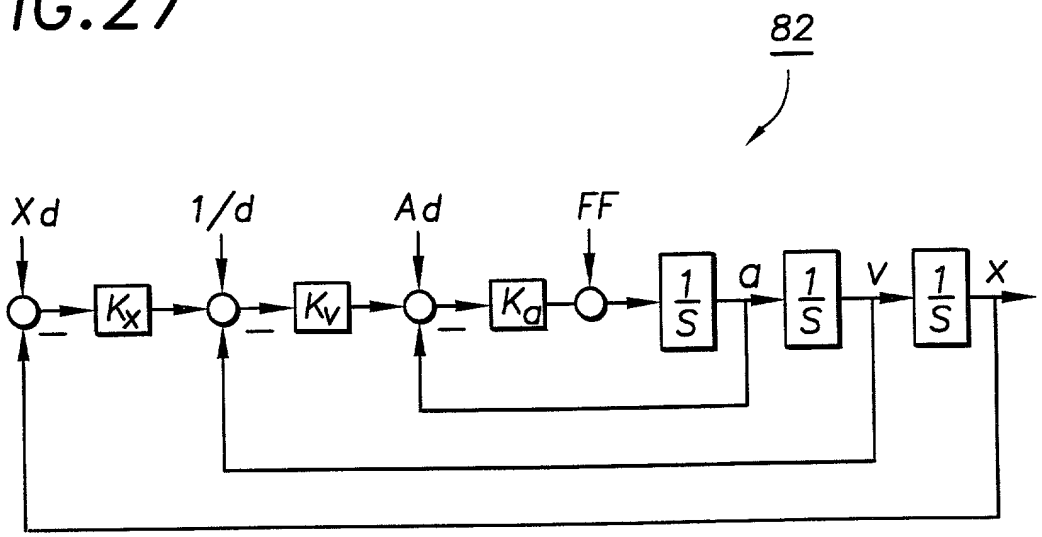
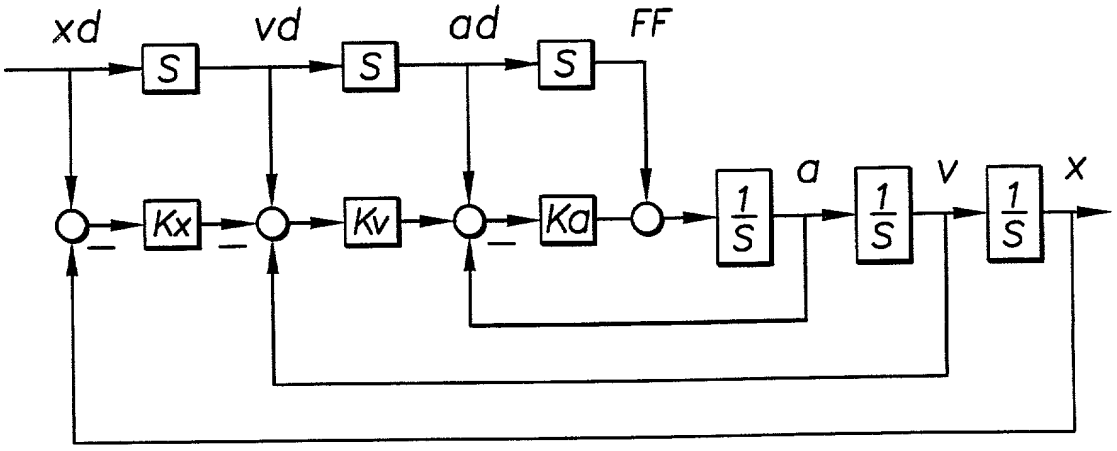


FIG.28



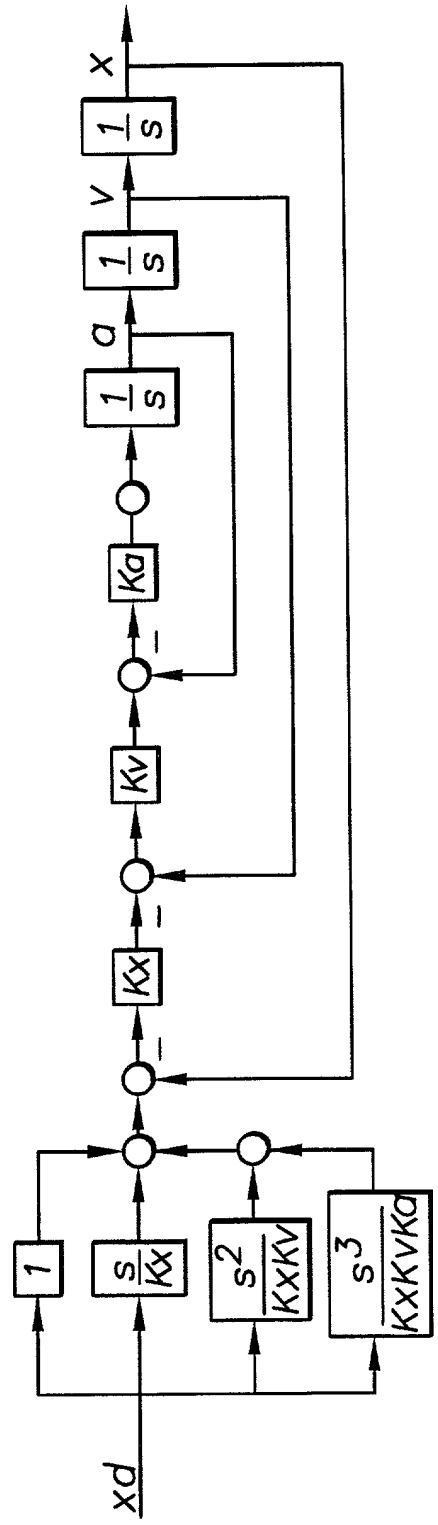

xd
1
s/Kx
s²/KxKv
s³/KxKvKa
Kx
Kv
Ka
1/s
1/s
1/s
x
v
a

FIG.29

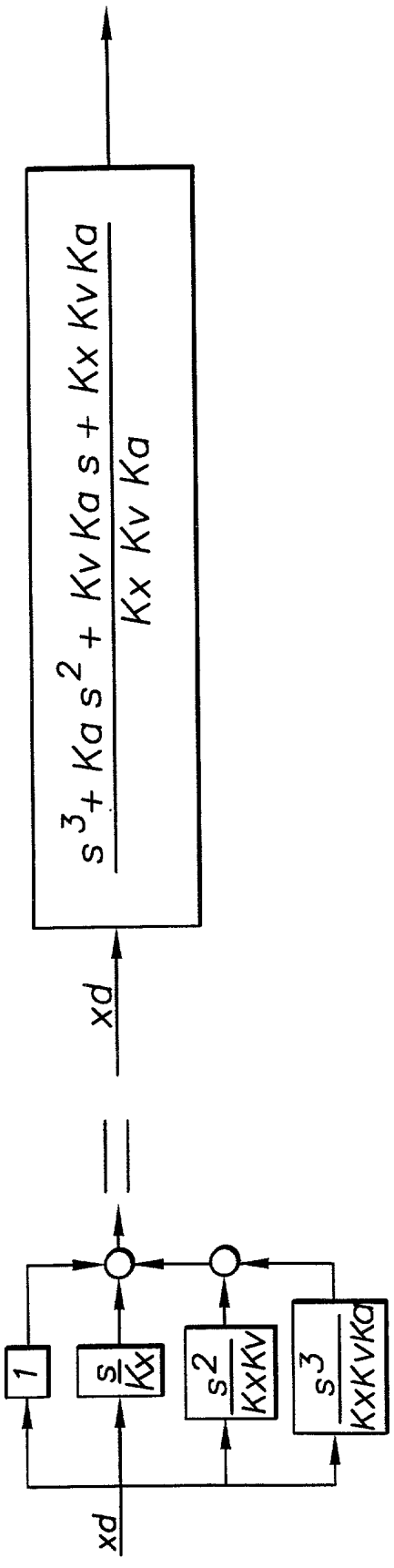

xd
1
s/Kx
s²/KxKv
s³/KxKvKa
s³+ Ka s² + Kv Ka s + Kx Kv Ka
Kx Kv Ka

FIG.30

FIG.31

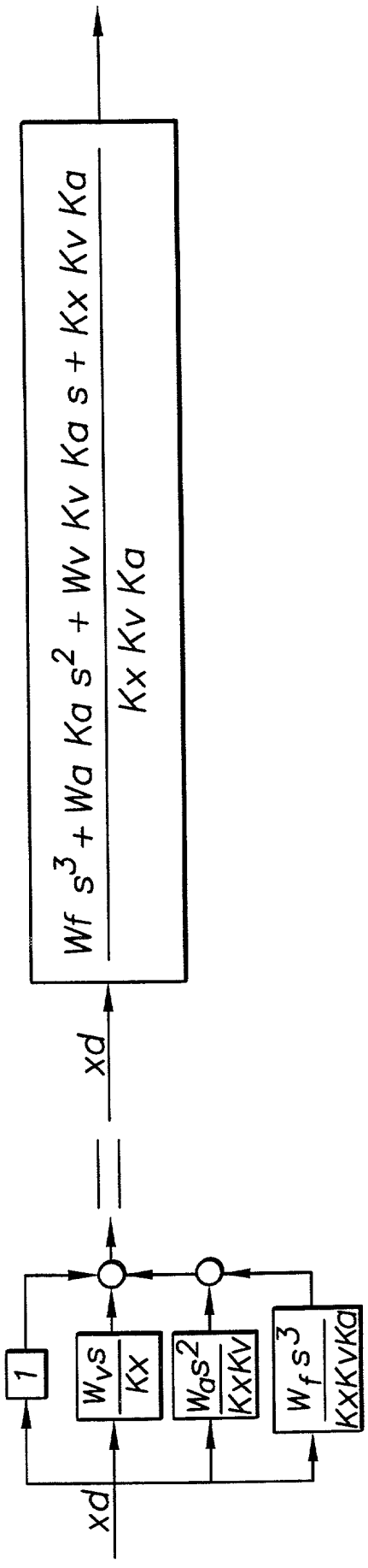

xd
1
Wvs / Kx
Wos2 / KxKv
Wf s3 / KxKvKa
xd
Wf s3 + Wa Ka s2 + Wv Kv Ka s + Kx Kv Ka
Kx Kv Ka

FIG.32

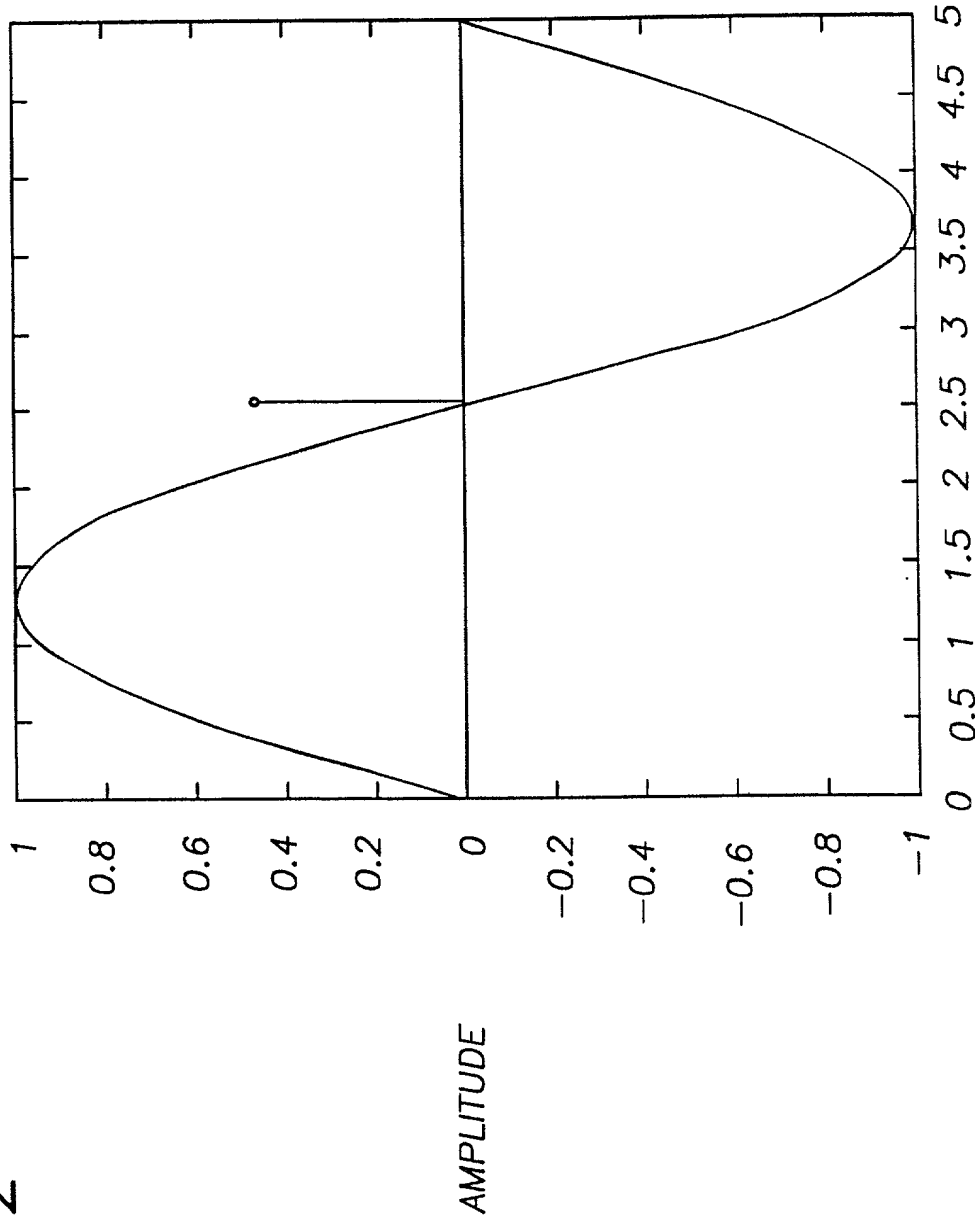

AMPLITUDE
1
0.8
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
−0.8
−1
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
TIME (sec)

FIG.33

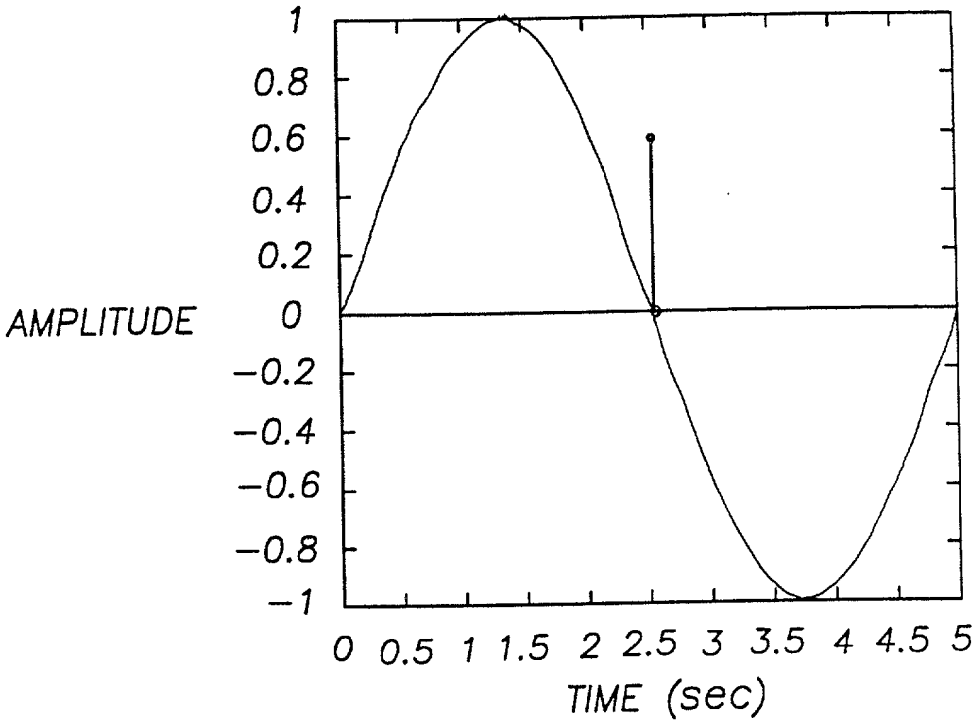
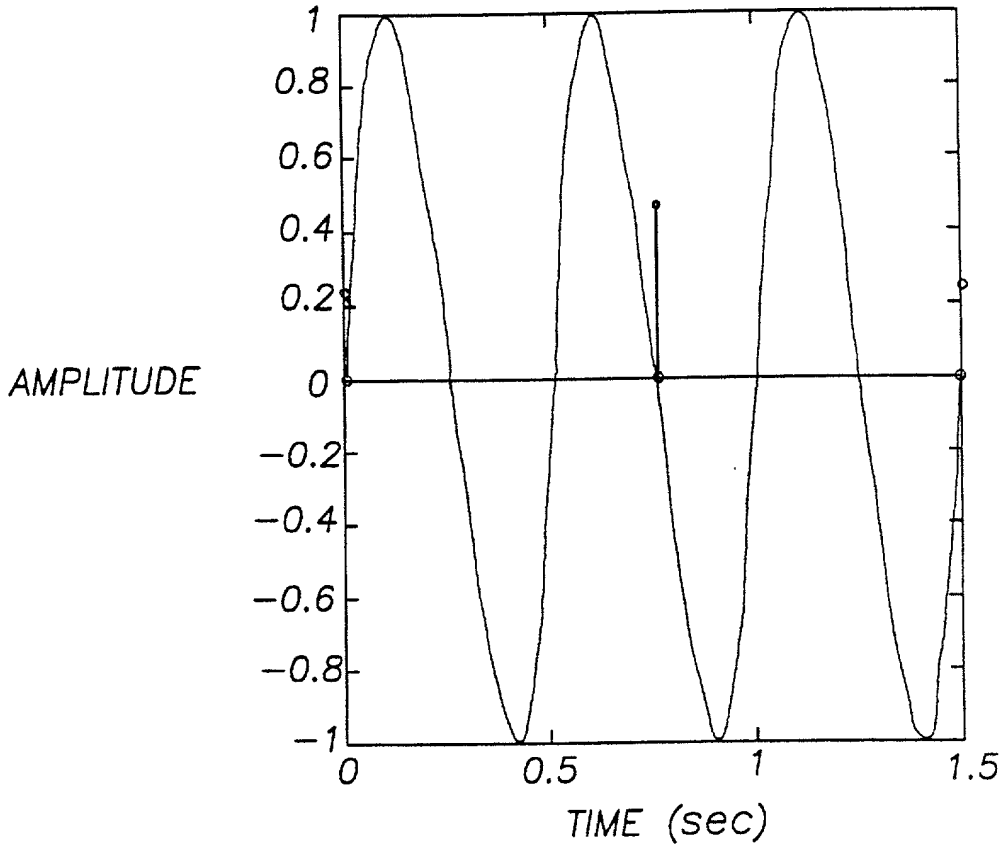


FIG.34



09753935 - 082804

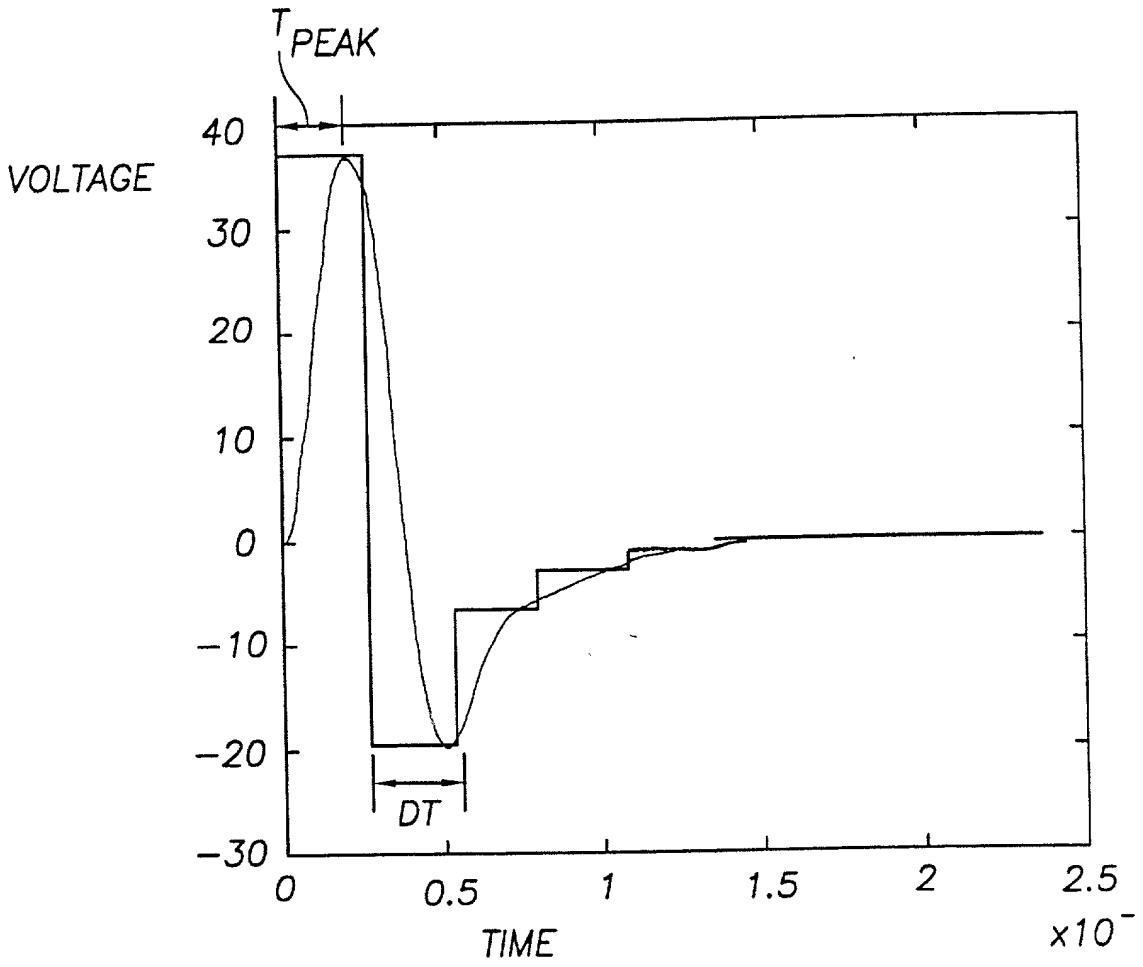



FIG.35